

Serial No. 09/008965

Response dated August 18, 2004

Response to Final Office Action dated March 18, 2004

Page 3 of 9

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

### **Listing of Claims:**

1 (currently amended). A connector assembly suitable for connecting a plurality of signals to a data processing system, comprising:

a receptacle configured to attach to an adapter card of the data processing system wherein a longitudinal axis of ~~the~~ a receptacle housing extends perpendicularly to a plane defined by the adapter card, the receptacle including a set of contact structures oriented along an axis parallel to the longitudinal axis;

a probe including a plurality of contact elements wherein the probe is sized to be received within the receptacle and wherein the probe is rotatable within the receptacle from a first position, in which the probe contact elements do not contact the receptacle contact structures to a second position in which the probe contact elements align with the receptacle contacts structures;

wherein the receptacle contact structures are further configured to connect to corresponding signals and the probe contact elements are configured to connect to corresponding interconnects such that the signals are connected to their corresponding interconnects when the probe is received within the receptacle in the second position.

2 (previously presented). The apparatus of claim 1, wherein the receptacle contact structures extend within an interior surface of the receptacle housing and the probe contact elements extend from an exterior surface of the probe.

3 (original). The apparatus of claim 1, the receptacle further includes at least one probe guide extending from an interior surface of the receptacle housing and wherein an exterior surface of the probe defines at least one notch configured to receive the probe guide when the probe is inserted into the receptacle.

4 (previously presented). The apparatus of claim 1, wherein the receptacle further comprises an iris mechanism configured to transition from a closed position in which the iris covers an interior of the receptacle to a retracted position enabling insertion of the probe into the receptacle interior.

5 (original). The apparatus of claim 4, wherein the iris includes at least one tab arranged to engage a corresponding notched element of the probe and wherein the iris is configured to retract by engaging the probe notched element with the corresponding tab and rotating the probe relative to the receptacle.

Serial No. 09/008965

Response dated August 18, 2004

Response to Final Office Action dated March 18, 2004

Page 4 of 9

6 (previously presented). The apparatus of claim 1, wherein the probe includes a two-pieced probe cover sized to be received within the receptacle and a probe body including the probe contact elements and wherein the probe body is rotatable within the probe cover from the first position in which the probe cover prevents contact to the probe contact elements to the second position in which at least one gap defined by the probe cover pieces is aligned with at least one of the probe contacts thereby enabling the receptacle contact structures to contact the probe contact elements.

7 (previously presented). The apparatus of claim 6, wherein the probe includes a locking portion that defines a channel configured to receive a locking pin positioned on an exterior surface of a locking portion of the receptacle.

8 (previously presented). The apparatus of claim 7, wherein the channel enables a turn of the probe body sufficient to align the probe contact elements with the receptacle contact structures.

9 (previously presented). The apparatus of claim 6, wherein the probe body defines at least one notch configured to mate with the receptacle contact structures.

10 (previously presented). The apparatus of claim 6, wherein each probe contact element is connected to a corresponding interconnect running through an interior of the probe body.

11-20 (canceled).

21 (previously presented). An assembly, comprising:

an adapter card suitable for use with a data processing system the adapter card including a connector assembly comprising:

a receptacle configured to attach to the adapter card of the data processing system wherein a longitudinal axis of a receptacle housing extends perpendicularly to a plane defined by the adapter card, the receptacle including a set of contact structures oriented along an axis parallel to the longitudinal axis;

a probe including a plurality of contact elements arranged to align with the receptacle contacts structures when the probe is received within the receptacle;

wherein the receptacle contact structures are further configured to connect to corresponding signals and the probe contact elements are configured to connect to corresponding interconnects such that the signals are connected to their corresponding interconnects when the probe is received within the receptacle.

22 (previously presented). The system of claim 21, wherein the receptacle contact structures extend within an interior surface of the receptacle housing and the probe contact elements extend from an exterior surface of the probe.

*Serial No. 09/008965*

*Response dated August 18, 2004*

*Response to Final Office Action dated March 18, 2004*

*Page 5 of 9*

23 (original). The system of claim 21, the receptacle further includes at least one probe guide extending from an interior surface of the receptacle housing and wherein an exterior surface of the probe defines at least one notch configured to receive the probe guide when the probe is inserted into the receptacle.

24 (original). The system of claim 21, wherein the receptacle further comprises an iris configured to transition from a closed position in which the iris covers an interior of the receptacle to a retracted position enabling insertion of the probe into the receptacle interior.

25 (original). The system of claim 24, wherein the iris includes at least one tab arranged to engage a corresponding notched element of the probe and wherein the iris is configured to retract by engaging the probe notched element with the corresponding tab and rotating the probe relative to the receptacle.

26 (previously presented). The system of claim 1, wherein the probe includes a two-pieced probe cover sized to be received within the receptacle and a probe body including the probe contact elements and wherein the probe body is rotatable within the probe cover from a first position in which the probe cover prevents contact to the probe contact elements to a second position in which at least one gap defined by the probe cover pieces is aligned with at least one of the probe contacts thereby enabling the receptacle contact structures to contact the probe contact elements.

27 (previously presented). The system of claim 26, wherein the probe includes a locking portion that defines a channel configured to receive a locking pin positioned on an exterior surface of a locking portion of the receptacle.

28 (previously presented). The system of claim 27, wherein the channel enables a turn of the probe body sufficient to align the probe contact elements with the receptacle contact structures.

29 (previously presented). The system of claim 26, wherein the probe body defines at least one notch configured to mate with the receptacle contact structures.

30 (original). The system of claim 26, wherein each probe contact element is connected to a corresponding interconnect running through an interior of the probe body.

31 (previously presented). A connector assembly for use with a data processing system, comprising:

a cylindrical receptacle attachable to an adapter card such that a longitudinal axis of the receptacle is perpendicular to the adapter card and wherein the receptacle includes a housing having a set of evenly spaced contact structures arranged along an axis that is parallel to the longitudinal axis of the receptacle; and

*Serial No. 09/008965*

*Response dated August 18, 2004*

*Response to Final Office Action dated March 18, 2004*

*Page 6 of 9*

a probe rotatable within the receptacle from a first position to a second position, wherein a line of contact elements along an outer surface of the probe contacts the receptacle contact structures when the probe is the second position.

32 (previously presented). The assembly of claim 31, wherein the receptacle contact structures extend within an interior surface of the receptacle housing and the probe contact elements extend from an exterior surface of the probe.

33 (previously presented). The assembly of claim 31, the receptacle further includes at least one probe guide extending from an interior surface of the receptacle housing and wherein an exterior surface of the probe defines at least one notch configured to receive the probe guide when the probe is inserted into the receptacle, wherein the probe guide prevents the probe from attaining the second position until the probe is fully inserted into the receptacle.

34 (previously presented). The assembly of claim 31, wherein the receptacle further comprises an iris configured to transition from a closed position in which the iris covers an interior of the receptacle to a retracted position enabling insertion of the probe into the receptacle interior.

35 (previously presented). The assembly of claim 34, wherein the iris includes at least one tab arranged to engage a corresponding notched element of the probe and wherein the iris is configured to retract by engaging the probe notched element with the corresponding tab and rotating the probe relative to the receptacle.

36 (previously presented). The assembly of claim 1, wherein the probe includes a two-pieced probe cover sized to be received within the receptacle and a probe body including the probe contact elements and wherein the probe body is rotatable within the probe cover from a first position in which the probe cover prevents contact to the probe contact elements to a second position in which at least one gap defined by the probe cover pieces is aligned with at least one of the probe contacts thereby enabling the receptacle contact structures to contact the probe contact elements.

37 (previously presented). The assembly of claim 36, wherein the probe includes a locking portion that defines a channel configured to receive a locking pin positioned on an exterior surface of a locking portion of the receptacle.

38 (previously presented). The assembly of claim 37, wherein the channel enables a turn of the probe body sufficient to align the probe contact elements with the receptacle contact structures.

39 (previously presented). The assembly of claim 36, wherein the probe body defines at least one notch configured to mate with the receptacle contact structures.

40 (previously presented). The assembly of claim 36, wherein each probe contact element is connected to a corresponding interconnect running through an interior of the probe body.